grains by MOD from lead titanate ($PbTiO_3$). In view of this, if a crystalline material of lead titanate is produced by MOD, and is then subjected to a hydrothermal processing with a barium hydroxide aqueous solution, at least 95% of the A sites can be substituted with barium. Specifically, it is possible with this manufacturing method to produce lead-barium titanate expressed by the chemical formula $(Ba_xPb_{1-x})TiO_3$, where x in this formula is within the range of $0 < x < 0.05$.

In the Claims:

Please cancel claims 1-18, and 21-26 without prejudice to or disclaimer of the subject matter therein.

Please substitute the following claims 19, 20, and 27-29 for the pending claims 19, 20, and 27-29.

19. (Amended) A method for manufacturing a piezoelectric element having a piezoelectric material with a perovskite crystal structure expressed by the formula ABO_3 in which the symbol A represents at least an element "a", comprising the steps of:

a) forming a lower electrode;

b) forming over the lower electrode a film of the piezoelectric material having a perovskite crystal structure expressed by the formula ABO_3 in which the symbol A represents at least an element "a" by,

a first step of producing an oxide in an amorphous state containing an element "a' " and subjecting the oxide to a hydrothermal process using an aqueous solution containing the element "a' " thereby crystallizing the oxide, wherein the oxide produced in the first step is a piezoelectric material having a perovskite crystal structure expressed by the formula ABO_3 in which the symbol A represents at least an element "a' "; and

a second step of producing a piezoelectric material by subjecting the oxide produced in the first step to a hydrothermal process using an aqueous solution containing the element "a", so as to increase the amount of the element "a" contained in the piezoelectric material due to its substitution for element "a' " contained in the oxide produced in the first step; and

c) forming an upper electrode over the piezoelectric material formed in step b.

20. (Amended) A method of forming an ink-jet recording head, comprising the steps of:

forming a diaphragm film over a substrate;

manufacturing a piezoelectric element over the diaphragm film by the method for manufacturing a piezoelectric element according to claim 19; and

working the substrate and forming a pressurization chamber at a site capable of transmitting displacement of the diaphragm film produced by driving of the piezoelectric element.

27. (Amended) A piezoelectric element comprising:

a piezoelectric material expressed by the chemical formula $(Ba,Pb)TiO_3$, wherein the piezoelectric material is composed of acicular crystals having dislocation layers in which lattice defects are present and wherein the spacing between adjacent dislocation layers is at least 10 nm; and

electrodes with which voltage can be applied to said piezoelectric material.

28. An ink jet recording head, wherein the piezoelectric element according to claim 27 is provided as a piezoelectric actuator.

29. A printer, equipped with the ink jet recording head according to claim 28 as printing means.

Please add the following new claims 30-34.

30. (new) A method for manufacturing a piezoelectric element having a piezoelectric material with a perovskite crystal structure expressed by the formula ABO_3 in which the symbol A represents at least an element "a", comprising the steps of:

a) forming a lower electrode;

b) forming over the lower electrode a film of the piezoelectric material having a perovskite crystal structure expressed by the formula ABO_3 in which the symbol A represents at least an element "a" by,

a first step of producing an oxide in an amorphous state containing an element "a' "; and

a second step of producing a piezoelectric material by crystallizing the oxide produced in the first step in a hydrothermal process using an aqueous solution containing the element "a", so as to increase the amount of the element "a" contained in the piezoelectric material due to its substitution for element "a' " contained in the oxide produced in the first step; and

c) forming an upper electrode over the piezoelectric material formed in step b.

31. (new) The method for manufacturing a piezoelectric element according to claim 30, wherein the hydrothermal process performed in step b is conducted using an aqueous solution containing both the element "a" and the element "a' ", and wherein the ratio in which the element "a" and the element "a' " are present in the aqueous solution is between 2:8 and 4:6.

32. (New) The method for manufacturing a piezoelectric element according to claim 31, wherein the aqueous solution containing the element "a' " is an alkali aqueous solution of a compound expressed by the formula $a'(OH)_n$ (n = 1, 2, or 3).

33. (New) The method for manufacturing a piezoelectric element according to claim 30, wherein the oxide in an amorphous state produced in step b is produced by pyrolyzing a sol containing an organometallic.

34. (New) The piezoelectric element according to claim 27, wherein said piezoelectric material is expressed by the chemical formula $(Ba_xPb_{1-x})TiO_3$, and x in this formula is within the range of $0 < x < 0.05$.

In the Drawings:

Please substitute Figure 3 which accompanies the ***Request to Approve Proposed Drawing Corrections*** submitted herewith for the pending Figure 3.